United States
Department of
Agriculture

**Animal and
Plant Health
Inspection
Service**

USDA Wildlife Services Protects Property

Property in Urban and Suburban Areas, Infrastructure in Urban and Rural Areas, Commercial and Military Aircraft

Overview

Wildlife Services (WS), a program within the U.S. Department of Agriculture's Animal and Plant Health Inspection Service, provides Federal leadership and expertise to resolve wildlife conflicts that threaten public and private resources. WS works in every State to prevent wildlife damage to property, roads and bridges, aircraft, and other important man-made resources.

Protecting Property in Urban and Suburban Areas

Each year, wildlife cost property owners millions of dollars in damage, underscoring the need for responsible wildlife damage management. WS protects homes, lawns, landscaping, golf courses, parks, pets, equipment and machinery, industrial facilities, and other property against wildlife damage. In fiscal year (FY) 2001, WS conducted more than 23,700 technical assistance projects to reduce wildlife damage in urban, suburban, and rural locations as well as at airports across the country. Technical assistance enables property owners to work on their own to resolve wildlife conflicts. WS provides critical information, guidance, and sometimes equipment to assist property owners in their efforts. When the conflict is more significant, however, WS specialists employ direct assistance, using their knowledge and expertise to disperse, remove, or relocate problem wildlife, such as vultures, raccoons, and bears.

In FY 2002, WS spent more than $9 million to protect property from wildlife damage. This damage can be relatively minor or it may result in significant economic loss and inconvenience. In an effort to gain entry into homes and other properties, wildlife can damage foundations, structures, and even internal wiring. The excrement from roosting birds or bats is not only foul, but it can also corrode machinery, car paint, and create a slipping hazard on sidewalks. Hungry wildlife, such as geese and deer, can destroy golf course greens, fruiting plants, lawns, and other landscaped areas. In addition to causing damage, overabundant wildlife populations can also create quite a nuisance. The excrement and noise from a roost of vultures or crows can be so severe that backyard swing sets, grills, and lawn furniture become useless.

Protecting Infrastructure in Urban and Rural Areas

Roads, bridges, airport runways, dams, water drainage systems, and utilities are also vulnerable to wildlife damage. WS is frequently called upon to relocate or remove wildlife that threaten vital urban and rural infrastructure. Aquatic and burrowing animals such as beavers, ground hogs, gophers, ground squirrels, and armadillos often weaken foundations and accelerate erosional damage, causing these structures to crack or even collapse. Birds and other wildlife are also frequently responsible for electrical power outages that can result in thousands of dollars in damage and lost revenue.

Brown tree snakes in Guam regularly caused electrical shortages and power outages that resulted in more than more than $1 million in damage until WS began a successful damage management program.

Monk parakeets, hawks, and vultures are also well known for causing damage to urban infrastructure when they nest, roost, and perch on telephone poles, and electrical and communication towers.

Resolving Beaver Damage—Beaver are one of the most destructive wildlife species, causing millions of dollars in damage to roads, bridges, dikes and dams, sewer and water treatment facilities, and landscape plants. Many experts believe that the cost of beaver damage is greater than that caused by any other wildlife species in the United States. In Mississippi and North Carolina, the problem is so severe that WS conducts Statewide beaver damage management programs that receive major funding from State agencies. In North Carolina alone, the beaver population is estimated at 500,000. WS also conducts large-scale beaver damage management programs in more than a dozen additional States, and responds to individual requests for assistance on a case-by-case basis.

In FY 2002, WS prevented an estimated $23.7 million in beaver damage. WS specialists used very conservative models to calculate

the damage that was prevented through their efforts. If less conservative models had been used, this figure could have been two to three times higher.

To prevent beaver damage, WS specialists break apart beaver dams that clog waterways and flood roads and timber resources. They also remove beaver from areas experiencing high levels of damage. In addition, WS has identified multiple research needs relevant to managing beaver damage. These needs include information on attractants, search dogs, electronic frightening and detection devices, habitat modification, mechanical barriers, "natural/home-made" remedies, non-target concerns, repellants, toxicants, trap development, and basic biology. WS' National Wildlife Research Center (NWRC) is currently conducting research on a number of methods that could be used to prevent beaver damage.

Protecting Transportation

As wildlife populations have increased in the last decade so have the number of wildlife collisions with airplanes, trains, and automobiles. These high-speed or mid-air collisions can be deadly and result in serious damage. WS plays a significant role in helping to prevent birds, deer, coyotes, and other wildlife from causing such accidents. Collisions, however, are not the only threat that wildlife can pose to transportation. Rats, mice, and other rodents can also chew through engine wiring, creating potentially dangerous consequences.

Deer Collisions with Automobiles—The United States deer population is at an all time high of nearly 30 million. Overabundant deer populations in urban and suburban areas lead to countless accidents each year. Although this damage is difficult to quantify because many accidents go unreported, one study estimates that more than one million deer collisions with vehicles occur in the United States annually. These accidents result in repair costs of more than $1 billion and an estimated 29,000 human injures. WS works to reduce deer populations in heavily populated areas in order to increase public safety. NWRC, WS' research arm, has given high priority to research on the reproductive management of deer. NWRC researchers have had success in testing contraceptive vaccines on white-tailed deer at Pennsylvania State University. The next step for researchers is to test these vaccines in the field.

Wildlife Collisions with Aircraft—Wildlife can pose a serious threat at airports across the United States. While large mammals are responsible for some collisions, the vast majority of wildlife strikes are caused by birds. Although it may not seem like a bird could cause much damage, one Canada goose has the potential to take down a major jetliner, threatening the lives of passengers and destroying the aircraft. In September 1995, the U.S. Air Force lost 24 airmen and a $190 million AWACS aircraft to a bird strike. More recently in 2000, the engine of a B-747 was destroyed in a fiery explosion after being struck by a Western gull following takeoff from Los Angeles International Airport. Parts of the engine fell onto a public beach and the pilot was forced to dump 83 tons of jet fuel over the ocean before safely landing the aircraft, which was carrying 449 passengers. In total, wildlife collisions cost U.S. civil aviation more than $470 million annually.

Through a balanced effort involving research and wildlife management, WS is reducing the incidence of wildlife-caused damage to aviation. WS is recognized internationally for its scientific expertise in reducing wildlife hazards at airports and military bases throughout the United States. In FY 2002, WS received requests for assistance from nearly 500 airports and provided both technical and on-site assitance.

For example, WS provides information and equipment to airport managers in order to reduce the presence of wildlife, especially birds, around runways and airport operations areas. Changing airport habitat by removing landscaping, such as ponds and tall grass, is one effective way to reduce the presence of wildlife around runways. In addition, WS provides hands-on assistance to trap and remove wildlife that are a threat to aircraft. WS also provides important training to airport personnel on how to identify and manage certain wildlife hazards. In FY 2002, WS trained 1,131 airport personnel at 185 airports across the country. This marked a 100 percent increase in training over the previous year.

NWRC complements WS work in the field by conducting research to better manage wildlife damage at airports. For example, NWRC scientists have been studying the height and type of vegetation around airports to determine how to minimize populations of birds and other wildlife. Another recent experiment evaluated how a mowed-grass regime reduced rodents and birds of prey at JFK International airport. Most significantly, NWRC is developing a 15-year database that will contain more than 60,000 records of wildlife strikes between 1990 and 2004. This database will provide an objective assessment of the nature and magnitude of wildlife strikes at airports across the country.

Wildlife Strike Statistics

- In 2002, nearly 6,000 wildlife strikes to civil aircraft were reported in the United States. Only about 20 percent of wildlife strikes are actually reported.
- Wildlife strikes to civil aircraft have increased more than 100 percent from 1990-1999.
- Wildlife strikes cause U.S. aircraft to experience more than 94,000 hours of downtime annually.
- WS provided wildlife damage management assistance to approximately 500 airports in FY 2002.
- Wildlife strikes cost U.S. civil aviation more than $470 million annually.